

Application No. 10/692,267  
Response to Final Office Action

Customer No. 01933

R E M A R K S

Reconsideration of this application, as amended, is respectfully requested.

ALLOWABLE SUBJECT MATTER

The Examiner's allowance of claims 7-38 is respectfully acknowledged.

THE CLAIMS

Claim 1 has been amended to clarify the feature of the present invention whereby, in the casing, the surface temperature detecting sensor is placed at the first position (having an opening portion) such that the surface temperature detecting sensor is directly exposed to heat radiation of the heating roller through the opening, and the compensation temperature sensor is placed at the second position (which is enclosed). See, for example, Figs. 5-9 (in particular Fig. 8) and the disclosure in the specification at page 60, lines 13-16 and page 68, lines 6-13.

No new matter has been added and no new issues have been raised which require further consideration on the merits and/or a new search. Accordingly, it is respectfully requested that the amendments to claim 1 be approved and entered under 37 CFR 1.116.

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#### THE PRIOR ART REJECTION

Claims 1-6 were again rejected under 35 USC 102 as being anticipated by USP 6,684,037 (previously cited "Tamaoki"). This rejection, however, is again respectfully traversed.

According to the present invention as recited in clarified amended independent claim 1, a fixing device is provided that comprises: (a) a heating roller having a heating device, and (b) a temperature detector which is spaced away from the heating roller, and which comprises: a surface temperature detecting sensor for detecting a temperature of a surface of the heating roller, a compensation temperature sensor for detecting an ambient temperature of the surface temperature detecting sensor, and a casing having an opening portion at a first position and a portion enclosed by the casing at a second position.

More specifically, according to the present invention as recited in clarified amended independent claim 1, the surface temperature detecting sensor is placed at the first position such that the surface temperature detecting sensor is directly exposed to heat radiation of the heating roller through the opening, and the compensation temperature sensor is placed at the second position.

Thus, according to the present invention as recited in clarified amended independent claim 1 the surface temperature detecting sensor is directly exposed to heat radiation from the

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heating roller. As a result, delay in detecting the temperature of the heating roller may be minimized.

In addition, according to the structure of the present invention as recited in independent claim 1, the opening portion is disposed so as not to enter a region between a vertical plane containing a central axis of the heating roller and a tangential plane to a circumferential surface of the heating roller parallel to the vertical plane, and a central portion of the surface temperature detecting sensor faces the central axis of the heating roller. The surface temperature detecting sensor according to independent claim 1 is thus positioned to detect heat radiation directly while the effected of convected heat is minimized.

By contrast, according to Tamaoki, the temperature detector 9 is positioned on the back of an infrared ray absorbing film 8. With the structure of Tamaoki, the film 8 receives the heat radiation from the fixing roller 2, and the thermistor element for film temperature detection 9 detects the temperature of the infrared ray absorbing film 8 as a change in resistance of the thermistor element for film temperature detection 9. Thus, according to Tamaoki the sensor 9 indirectly detects the heat radiated by the fixing roller 2 via the infrared ray absorbing film 8. See column 6, lines 35-39 of Tamaoki.

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It is respectfully submitted, therefore, that Tamaoki clearly does not disclose, teach or suggest directly exposing a surface temperature detecting sensor to the heat radiation of the heating roller, as according to the present invention as recited in clarified amended independent claim 1.

In view of the foregoing, it is respectfully submitted that amended independent claim 1, as well as claims 2-6 depending therefrom, clearly patentably distinguish over Tamaoki, under 35 USC 102 as well as under 35 USC 103, along with allowed claims 7-38.

\* \* \* \* \*

Entry of this Amendment, allowance of the claims and the passing of this application to issue are respectfully solicited.

If the Examiner has any comments, questions, objections or recommendations, the Examiner is invited to telephone the undersigned for prompt action.

Respectfully submitted,



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